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Matériel Test Procedure 3-3-501
U. S. Army Infantry Board

U. S. ARMY TEST AND EVALUATION COMMAND
COMMON SERVICE TEST PROCEDURE

PERSONNEL TRAINING

1. OBJECTIVE

The objective of the procedures outlined in this MTP is to provide a means of determining, 1) the type and duration of instruction required to train test soldiers in the use of a test item, 2) whether a proposed program of instruction (POI) is adequate to develop proficiency in the use of the item, 3) whether the item meets the training criteria contained in applicable Qualitative Matériel Requirements (QMR), or Small Development Requirements (SDR).

2. BACKGROUND

The experience obtained and the data accumulated during service testing of a new or improved commodity provides valuable information for determining the type and amount of instruction required to develop proficiency in use of the item. Since many test items closely resemble existing standard equipment in physical and functional characteristics and manner of tactical employment, the training requirements may be limited to relatively minor changes in current methods and techniques; other items may require development of an entirely new program of instruction.

The service test should result in specific conclusions and recommendations useful to agencies responsible for formulation of doctrine and service schools responsible for the preparation of material used in specialist, technical and tactical training.

3. REQUIRED EQUIPMENT

- a. Technical and doctrinal literature
- b. Test item (as applicable)
- c. Training aids and devices (as applicable)

4. REFERENCES

- A. FM 21-5, Military Training Management.
- B. FM 21-6, Techniques of Military Instruction.
- C. Applicable QMR or SDR.
- D. Applicable Commodity MTP.
- E. Preliminary Operating and Maintenance Manual (POMM).
- F. Doctrinal, Technical and Training publications pertaining to similar type commodities:
 - 1) Field Manuals (FM)
 - 2) Technical Manuals (TM)
 - 3) Army Training Programs (ATP)
 - 4) Army Training Tests (ATT)

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- 5) Programs of Instruction (POI)
- 6) Army Subject Schedules (ASubjScd)
- 7) Firing Tables ((FT) When Weapons are Being Tested))
- 8) Training Circulars (TC)
- 9) Basis of Issue (BOI)

G. USAMC Regulation 350-6, New or Modified Equipment and Materiel.
H. MTP 3-3-517, Safety.

5. SCOPE

5.1 SUMMARY

The individuals directly responsible for planning and conducting the service test must possess a thorough knowledge of the technical characteristics and tactical applications of the item to be tested. In the case of minor items or minor product improvements the necessary knowledge may be acquired by individual study of the item and associated literature. The more complex items may require a well organized and documented course of training. Those responsible for conduct of the test must instruct the test soldiers who will participate in the service test. Proper planning and conduct of this training and concurrent recording of essential data will provide information of great value to the agencies responsible for preparation of training literature and formal courses of instruction.

The steps outlined below are designed to provide the required test personnel training and evaluation in a logical sequence of familiarization and instruction, and include both functional operations and tactical applications. The procedures are intended to be applied selectively and to the extent required by the nature and complexity of the test item.

- a. Familiarization of Test Personnel -- Examination of the test item and review of literature furnished.
- b. Training of Test Activity Personnel -- (1) For complex items, training conducted by manufacturer's representatives or the developing agency, or (2) self-conducted training for less complex items.
- c. Program of Instruction -- Preparation of a proposed POI to be used for training of test soldiers.
- d. Training of Test Soldiers -- Conduct of instruction of test soldiers, using the proposed POI.
- e. Adequacy of Training Literature -- Review, analysis, and evaluation of training literature furnished with the test item.
- f. Adequacy of Training Aids and Devices -- Evaluation of training aids and devices furnished, procured, or fabricated for use in the conduct of training.
- g. Adequacy of Training -- Review, analysis, and evaluation of all training conducted; determination of adequacy of the proposed POI; determination of compliance with stated training criteria.

5.2 LIMITATIONS

Procedures in this MTP pertaining to maintenance training are limited to the training required for operator and organizational maintenance.

6. PROCEDURES

6.1 PREPARATION FOR TEST

a. Ensure that all test supervisory personnel receive New Equipment Training (NET) as prescribed in reference G.

b. Ensure that the test soldiers to be trained are representative of the soldiers who shall operate and maintain the test item under field conditions.

c. Ensure that advance coordination has been made with appropriate U. S. Army Combat Developments Command (USACDC) and U. S. Continental Army Command (USCONARC) elements to confirm current doctrine and training.

d. Prepare record forms for systematic entry of data to include references listed in paragraph 4, above.

e. Ensure that provisions have been made for the handling of a classified materiel in accordance with security regulations.

f. Prepare adequate safety precautions to provide safety for personnel and equipment, and ensure that all SOP's are observed throughout the test and that the item has successfully completed the examination prescribed in MTP 3-3-517.

6.2 TEST CONDUCT

6.2.1 Familiarization Study

a. Instruct test activity personnel who shall participate in the service test to examine the test item and review literature furnished with the item.

NOTE: For some minor items no further instructions may be required.

b. Determination of the necessity for additional training shall be at the discretion of the Test officer.

c. If further training of test activity personnel is required, the procedures of paragraph 6.2.2, below shall apply.

6.2.2 Training of Test Activity Personnel

6.2.2.1 Instruction Conducted by Developer

a. Manufacturer's representative or new equipment introductory teams (provided by the developing agency) shall provide instructions on complex equipments, particularly those differing significantly in technical characteristics from standard items.

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b. If training instructions are provided, test activity personnel shall evaluate the instructions/manuals content for adequacy.

c. Test officers shall observe techniques used, stages of instruction (introduction, explanation, demonstration, application, examination, review/critique) completeness of coverage, and time devoted to each subject or phase of instruction.

d. Training personnel shall evaluate the course material rather than the effectiveness of any individual instructor.

e. Test officers shall study the developer's plan of instruction, training aids and devices to determine applicability for further use in the instruction of test type personnel.

6.2.2.2 Self-Conducted Instruction

a. Selected test activity personnel shall plan to conduct the necessary training of other test activity participating personnel under supervision of the Test officer if the design and use of the test item is such as to require little or no developer training assistance.

b. Using training literature provided with the test item, test instructors for this subtest shall undertake an intensive self-training course to include, as indicated, the following:

- 1) Theory of operation and functioning
- 2) Assembly and disassembly
- 3) Operator and organizational maintenance
- 4) Practice in tactical employments

c. Subject training personnel to a complete orientation program.

d. Test instructors shall prepare the following orientation program for other participating test activity personnel:

- 1) Instruction plans
- 2) Lesson plans
- 3) Graphic Training aids

NOTE: Plans shall be flexible and changed as necessary as the training progresses.

e. Observe and question training personnel to determine whether any instructions are unduly difficult.

f. Review and evaluate all opinions and recommendations for changes, if applicable.

g. Maintain accurate records of all plans, changes made, and type and duration of instruction in each subject or phase of instruction.

6.2.3 Program of Instruction (POI)

a. Develop a POI for the training of participating soldiers, as applicable.

b. Include the scope and number of hours of instruction proposed for each subject or phase of instruction in the POI.

c. Analyze and evaluate experience gained and the data accumulated during conduct of the procedures under paragraphs 6.2.1 and 6.2.2.

d. Determine suitability, adequacy and applicability of the POI for the training of test activity personnel and test soldiers.

6.2.4 Training of Test Soldiers

a. Using the proposed POI as a guide, test activity instructors shall prepare lesson plans for each subject or phase of instruction.

b. Conduct a course of instruction for the soldiers in accordance with the POI and the lesson plans. As the training progresses, changes and refinements in the lesson plans and the proposed POI shall be made at the discretion of the test officer.

6.2.5 Adequacy of Training Literature

a. Based on the experience gained during the conduct of the procedures of paragraphs 6.2.1 through 6.2.4, supervisors and instructors will make a final review, at the completion of training, of the training literature furnished with the test item.

b. Evaluate instructional material for accuracy, clarity, completeness and general adequacy, particularly with respect to operation and functioning, assembly and disassembly, operator and organizational maintenance and tactical employment.

6.2.6 Adequacy of Training Aids and Devices

a. At the completion of training, of the test soldiers, test supervisors and instructors shall re-examine all training aids and devices furnished, procured, or fabricated for use in conducting training.

b. Evaluate the material to determine its applicability, suitability, and adequacy for inclusion in recommended courses of training.

6.2.7 Adequacy of Training

a. At the completion of operational testing of the test item, test supervisors and instructors shall conduct a review and analysis of all training conducted and results of the training as reflected in proficiency examinations and actual user proficiency in the field.

b. An evaluation shall be made to determine whether 1) the proposed POI makes users proficient in use of the test item, and 2) the test item meets the training criteria described in applicable materiel requirements documents.

6.3 TEST DATA

6.3.1 Preparation for Test

a. In addition to the personnel data required by the commodity MTP, record the following for each test soldier:

- 1) Armed Forces Qualification Test (AFQT) Category
- 2) Army Qualification Battery (AQB) Scores
- 3) Physical Profile
- 4) Civilian Education

b. Record the following for each test activity instructor:

- 1) Name, rank and social security number
- 2) MOS
- 3) Length of service (and combat experience, if any)
- 4) Length of time in MOS
- 5) Qualification in arms
- 6) Experience in test activities
- 7) Qualification as an instructor

c. Any safety data required by MTP 3-3-517.

6.3.2 Familiarization Study

Record the following:

- a. A brief description of familiarization procedures for instructor personnel.
- b. Explain the basis for determination of whether or not additional training is required for test activity personnel.

6.3.3 Training of Test Activity Personnel

6.3.3.1 Instruction Conducted by Developer

Record the following:

- a. Agency conducting the instruction.
- b. Number and identity of instructors.
- c. Description of instruction conducted, including time devoted to each subject or phase of instruction, and total elapsed time required.
- d. Training aids and devices used.
- e. Plan of instruction (if available).
- f. Number and identity of test activity personnel receiving instruction.
- g. Opinions of test activity supervisors and students as to scope, completeness and adequacy of the instruction. Include specific recommendations for changes and improvements, if applicable.

6.3.3.2 Self-Conducted Instruction

Record the following:

- a. Number and identity of instructors.
- b. Description of self-training conducted by those selected as

instructors.

- c. Description of instruction given other test activity personnel, including scope and duration of each subject or phase.
- d. Training aids and devices used.
- e. Opinions of test activity supervisors and students as to scope, completeness and adequacy of the instruction and recommendations for changes, if applicable.
- f. Retain copies of preliminary instruction plans and lesson plans, and changes made.

6.3.4 Program of Instruction (POI)

Record:

- a. Subjects to be taught
- b. Scope of each subject
- c. Method of instruction
- d. Time allotted for each subject

6.3.5 Training of Test Soldiers

Record:

- a. Number and identity of test soldiers.
- b. A description of instruction given test soldiers, including scope and duration of each subject or phase.
- c. Copies of lesson plans.
- d. Training aids and devices used.
- e. A record of any changes made in the lesson plans and proposed POI as the result of experience gained during conduct of the training.
- f. Any additional pertinent information noted by the Test officer, test supervisors and instructors.

6.3.6 Adequacy of Training Literature

Record:

- a. Specific observations of test supervisors and instructors regarding the clarity, accuracy, completeness and general adequacy of training literature.
- b. Recommendations for additions, deletions and changes to the training literature, when appropriate.

6.3.7 Adequacy of Training Aids and Devices

Record:

- a. Description and photographs or sketches of training aids and devices.
- b. Phase and subject of instruction for which item is used.

c. Specific comments of supervisors and instructors regarding suitability and adequacy of each training aid and device.

6.3.8 Adequacy of Training

Record:

a. Results of proficiency examinations.

b. Observations of test supervisors, instructors and other test activity personnel regarding adequacy of training given test soldiers in each subject and phase of instruction, with specific reference to the proposed POI.

c. A comparison of the training conducted under the proposed POI with the training criteria described in applicable materiel requirements documents.

6.4 DATA REDUCTION AND PRESENTATION

a. All data having a bearing on training of personnel in use of the test item shall be extracted, collated, analyzed and evaluated to determine the training requirements. The proposed POI shall be reviewed and evaluated to determine if it meets the requirements.

b. Results shall be presented as indicated in the applicable commodity MTP. Where opinions are presented, they shall be identified as such, and separated from factual data.

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13. ABSTRACT <p>These Army Service Test Procedures describe means for evaluating the training implications of new equipment items in terms of (1) type and duration of instruction needed, and (2) the proposed Program of Instruction (POI). The evaluation is related to criteria expressed in applicable Qualitative Materiel Requirements (QMR), Small Development Requirements (SDR), Technical Characteristics (TC), or other appropriate design requirements and specifications.</p>			

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